REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Claims 1 and 4 have been amended. Claim 14 has been added.

The Examiner has rejected independent claim 4, and claims 5, 10, 11, and 13 that depend therefrom under 35 U.S.C. 101 as being directed to a non-statutory subject matter. In particular, the Examiner has indicated that a "statutory process must (1) be tied to another statutory class (a particular machine or apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing" (Pg. 2, Sect. 3). Accordingly, claim 4 has been amended so as to tie the method to a particular machine or apparatus. Additionally, claim 4 transforms an article or material into a different state or thing. Therefore, removal of the rejection of claim 4, and claims 5, 10, 11, and 13 that depend therefrom, is requested.

The Examiner has rejected claims 1, 4, 7, 10, 12, and 13 under 35 U.S.C. 103(a) as being anticipated by U.S. Pat. No. 6,473,664 to Lee et al. in view of U.S. Pat. No. 5,351,247 to Dow et al. The Examiner's rejection is traversed for the following reasons.

One aspect of the present invention relates to an apparatus for managing a liquid crystal substrate. The apparatus includes a data management section having a database, a liquid crystal testing device operable to determine whether at least one of a panel and a substrate in the liquid crystal substrate has a defect, and to

send, to the data management section, defect information indicative of at least the defect and whether the at least one of the panel and the substrate is defective, and a liquid crystal repair device operable to receive the defect information from the data management section and to repair the defect based on the received defect information. The liquid crystal repair device is operable to send, to the data management section, repair information that is indicative of at least a position that is actually repaired, and to correct the received defect information in a case where the received defect information contains incorrect information with regard to the defect and generate corrected defect information as a part of the repair information. The data management section is operable to record, in the database, the defect information sent from the liquid crystal testing device and the repair information sent from the liquid crystal repair device. The data management section is operable to redetermine the presence of the defect based on comparison between the defect information and the repair information which are recorded in the database. The data management section is operable to update the defect information recorded in the database with the corrected defect information.

Lee involves a manufacturing process automation system for the fabrication of semiconductor devices and TFT-LCDs. Specifically, Lee discloses machines (300a, 300b, 300c, 300d) that communicate with a file server (400). Additionally, a database (110) interacts with machine servers (200a, 200b, 200c, 200d) that communicate with the machines (300a, 300b, 300c, 300d). The machines (300a, 300b, 300c, 300d) may include a tester, a repairer, an exposing machine, an etching machine, and a sputtering machine.

Dow relates to an adaptive fault identification system. In particular, Dow

includes a test station (10) and a control computer (16). The control computer (16) is connected to a test bed (14) with a test bed control (20) and tests a unit-under-test (UUT) (12). The UUT (12) is connected to a data collection device (21) that is attached to the control computer (16) through a first interface (22). The "data collection device 21 captures two types of data, internal machine states and a representation of a currently executing built-in self test" (Col. 3, lines 51-53).

Amended claim 1 of the present application recites "a liquid crystal repair device ... to correct the received defect information in a case where the received defect information contains incorrect information with regard to the defect and generate corrected defect information as a part of the repair information" and that "said data management section is operable to update the defect information recorded in said database with the corrected defect information." Independent claim 4 recites the steps of "causing the liquid crystal repair device to correct the received defect information in a case where the received defect information contains incorrect information with regard to the defect, and to generate corrected defect information as a part of the repair information" and "updating the defect information recorded in said database with the corrected defect information."

Lee does not teach or suggest these features or steps. The Examiner seems to interpret the summary data disclosed in Lee such that it contains data corresponding to the claimed corrected defect information and it may be updated by the host allegedly equivalent to the claimed data management section. However, Lee merely exemplifies a number of defective glasses and a number of repaired glasses as the contents of the summary data (Col. 5, lines 27-28, 53 and 54). As

previously submitted, the suggested liquid crystal repair device (300b) of Lee merely performs repair with reference to the test result data. Therefore, the suggested liquid crystal repair device (300b) of Lee does not correct the summary data received from the host when the received summary data contains incorrect information with regard to the defect, and to generate corrected summary data to be sent to the host.

Moreover, since the suggested liquid crystal repair device (300b) of Lee cannot generate summary data corresponding to the claimed corrected defect information, the host of Lee, which is the suggested claimed data management section, cannot perform updating with the corrected defect information as required by claims 1 and 4. Additionally, it is noted that Dow fails to correct these deficiencies. Therefore, removal of the rejections of claims 1 and 4, from which claims 7, 10, 12, and 13 depend, is respectfully requested.

The Examiner has rejected claims 2, 3, and 5 under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Dow and U.S. Pat. No. 6,282,457 to Miura. Furthermore, the Examiner has rejected claims 8 and 11 under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Dow and U.S. Pat. Pub. 2003/0063792 to Hiroi et at. The Examiner's rejection is traversed for the following reason.

Miura relates to a device for controlling a treating station. Miura teaches a coating/development unit (2) that is connected to a host computer (5) and an exposure unit (3). A transfer unit (4) transfers a wafer (W) between the coating/developing unit (2) and the exposure unit (3), and a control section (20) is incorporated in the coating/developing unit (2). The "host computer does not output recipe information for the control of the transfer system, which means that the

transfer system operates independent of the host computer" (Col. 6, lines 32-35).

Hiroi involves an apparatus for inspecting a specimen. Specifically, Hiroi includes a beam source (1) for generating an electron beam (2). The apparatus further includes a deflector (3), an object lens (4), a stage (6), a detector (8), and an A/D converter (9), as shown in Fig. 4. A defect data storing means (201) stores defect data (200) and a data outputting means (203) outputs stored defect data (202).

It is noted that Miura and Hiroi do not correct the deficiencies of Lee and Dow. More specifically, Miura and Hiroi do not teach or suggest "a liquid crystal repair device ... to correct the received defect information in a case where the received defect information contains incorrect information with regard to the defect and generate corrected defect information as a part of the repair information" and that "said data management section is operable to update the defect information recorded in said database with the corrected defect information" as recited by claim 1. Nor do Miura and Hiroi teach or suggest the steps of "causing the liquid crystal repair device to correct the received defect information in a case where the received defect information contains incorrect information with regard to the defect, and to generate corrected defect information as a part of the repair information" and "updating the defect information recorded in said database with the corrected defect information" as recited by independent claim 4 of the present application. Therefore, even if the references were combined, they would not provide such features or steps. Thus, the Examiner has failed to provide a *prima facie* case of obviousness of claims 1 and 4, from which claims 2, 3, 5, 8 and 11 depend. Therefore, the rejection of

claims 2, 3, 5, 8 and 11 must be withdrawn.

New claim 14 has been added. It is offered that new claim 14 contains independently patentable subject matter. Favorable consideration of claim 14 is hereby requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. NGB-15369.

Respectfully submitted,

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